

# Exhibit 5

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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T-Mobile USA, Inc., AT&T Services Inc., AT&T Mobility LLC, AT&T  
Corporation, Cellco Partnership d/b/a Verizon Wireless, Nokia of America  
Corporation, Ericsson Inc.  
Petitioners

v.

Cobblestone Wireless LLC  
Patent Owner

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Case IPR2024-00137  
Patent 9,094,888

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**PETITION FOR *INTER PARTES* REVIEW  
OF U.S. PATENT NO. 9,094,888**

*Inter Partes* Review of U.S. Patent No. 9,094,888**3. Dependent claim 12**

**[12] A method according to claim 9, wherein the adapting one or more beams comprises adapting one or more beams based, at least in part, on one of a predetermined network load placed on the first wireless network due to the handoff of the wireless device or an effect of adapting one or more beams on other wireless devices currently communicatively coupled to the first wireless network.**

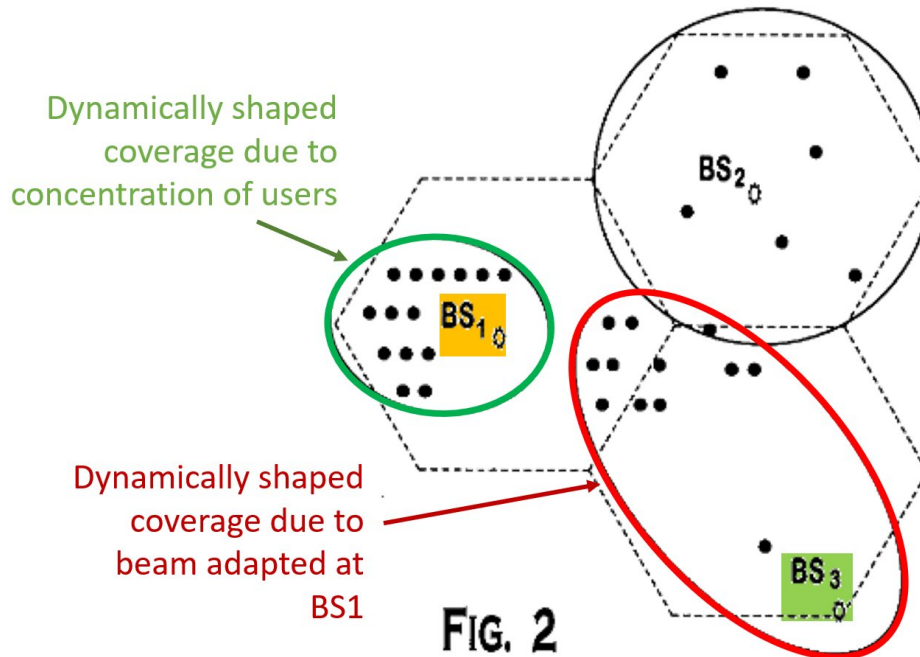
Chitrapu discloses this claim limitation. Chitrapu discloses adapting one or more beams based, at least in part, on one of (i) a predetermined network load placed on the first wireless network due to the handoff of the wireless device, or (ii) an effect of adapting one or more beams on other wireless devices currently communicatively coupled to the first network. Ex. 1005, ¶191.

Specifically, adaption based on the claimed limitations are expressly described in Chitrapu as part of the “smart handover” triggering event. Ex. 1003, ¶[0108] (“The first step is to trigger the smart handover process through the occurrence of a triggering event.”). The triggering event is based on a predetermined threshold. *E.g.*, Ex. 1003, ¶[0108] (“The triggering event preferably includes thresholds relating to . . . [e.g.,] base station load . . . .”); Ex. 1005, ¶192.

For example, Chitrapu discloses “a significantly high concentration of users in a small area can also be used as a triggering event.” Ex. 1003, ¶¶[0078], [0061] (“FIG. 2 illustrates the dynamic use of shaped transmission beams to address a specific concentration of users.”); *see also* Ex. 1003, Fig. 10, ¶[0107] (“[I]n FIG. 10, a high concentration of users proximate base station BS2 has resulted in the ‘smart’

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handover determination.”); Ex. 1005, ¶193. Figure 2 of Chitrapu (annotated below) illustrates “the dynamic use of shaped transmission beams to address a specific concentration of users.” Ex. 1003, ¶[0061].

**Ex. 1003, Fig. 2 (annotated); Ex. 1005, ¶193**

Chitrapu discloses “FIG. 2 illustrates a concentration of users in the base station BS1 region and the region between base station BS1 and base station BS3.” Ex. 1003, ¶[0075]. Chitrapu then discloses “Upon determining the high concentration of users *in these regions* [e.g., the triggering event is based on a determination about the concentration of users in both the respective base stations], the antenna arrays at base station BS1 and base station BS3 are used to transmit a selectively shaped and directed beam to provide the needed radio resources to the

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user concentrations.” Ex. 1003, ¶[0075]. In conjunction with the corresponding smart handover disclosure described above in claim 9, Chitrapu discloses adapting one or more beams based, at least in part, on a predetermined network load placed on the first wireless network due to the handoff of the wireless device. Ex. 1005, ¶196.

#### **4. Independent claim 20**

**[20.p] A system for a wireless device handoff between a first wireless network and a second wireless network, the system comprising:**

For at least the reasons discussed above regarding claim 9.p, Chitrapu and TS 36.300 renders obvious this limitation. As noted in that section, Chitrapu is not limited to any type of handover and inter-RAT handover was a well-known procedure in the art.

**[20.a] an antenna array configured to generate one or more adaptable beams to modify a coverage area for the first wireless network; and**

For at least the reasons discussed above regarding claim limitations 9.a and 9.b, Chitrapu and TS 36.300 renders obvious this limitation. In particular, Chitrapu discloses that the base station consists of an antenna array which are used to refocus the radio beams. Ex. 1003, ¶[0049], Fig. 4 (“Base Stations Refocus the Radio Beams Using Antenna Arrays”). Likewise, a POSITA would have known that beam forming requires adapting the beam using the antenna array. Ex. 1005, ¶201.

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Dated: November 22, 2023

Respectfully submitted,

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**CERTIFICATE OF WORD COUNT**

The undersigned hereby certifies that the portions of the above-captioned Petition for *Inter Partes* Review of U.S. Patent No. 9,094,888 specified in 37 C.F.R. § 42.24 have 10,489 words, in compliance with the 14,000 word limit set forth in 37 C.F.R. § 42.24(a)(1)(i). This word count was prepared using Microsoft Word 2010.

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***Inter Partes* Review of U.S. Patent No. 9,094,888**

**CERTIFICATION OF SERVICE (37 C.F.R. §§ 42.6(e), 42.105(a))**

The undersigned hereby certifies that true and correct copies of the above-captioned **PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 9,094,888**, all associated exhibits, and Petitioner's Power of Attorney were served in their entireties on November 22, 2023, upon the following parties via UPS®

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